/119 cont./

000 and bilocal groups of families. The group of families -- the
621 multiplicity of relationships permits no other designation --
431 is therefore the next smaller constituent element of the village unit; to be sure, the ceremonial gift-exchange emphasizes the subdivision of the village, in that it underlines the affiliation of the partner to one of the two other groups of families, but, on the other hand, also joins the three groups of families as common inhabitants of the same village.

It might now seem that the group of families, which appears in the gift-exchange as a functional unit, is only a chance conglomeration of nuclear families and thus of minor importance.
621 It comes into operation, however, on another decisive occasion,
166 namely, in connection with /120/ the migratory movements, which I shall sketch for you in a few words. The inhabitants of a
[361] village never remain longer than about three to four weeks in their
[342] main village, that clearing in the virgin forest with relatively permanently built houses; then they leave home for a period at least equally long, but seldom farther away than one to two days of travel, and build themselves in a favorable spot in the forest a row of small, triangular huts which are just large enough to provide room for a nuclear family, i.e., the parents and their unmarried children. The new place is chosen according to the
262 possibilities that it offers for gathering forest fruits and for hunting;
245 nevertheless economic reasons are not actually the cause for this
194 migration, for even during this period they continue to live from
166 the very fruitful banana planting near the main village. About every ten days a group of men go and fetch additional supplies of bananas, which the Waika today use for about 90 per cent
[222] of their diet. To be sure, during this forest period they live on
[224] gathered fruits and by hunting more than they do in the main village, and we shall therefore hardly go wrong in assuming that there are involved in these short-term forest sojourns traditionally preserved reminiscences of the era of pure hunting for wild food on the part of the Waika, undoubtedly still not very far in the past.

/56 cont./

481 The man, sometimes also the woman, puts this ring around the feet and presses them, with the hollow between the ball of the foot and the heel, in the form of a prehensile foot, firmly against the trunk so that they are fairly sucked against the bark. He assumes a squatting position and then hoists his body upward.

Fig. 27. Climbing ring.

Although he embraces the trunk with his arms and hands, for climbing he uses only his feet, which, because of the ring, always have a firm grip. This grip becomes particularly important after the man has reached the top where he now uses both hands to cut off the fruits.

[191] Such climbing rings are known in many parts of South America and are also used by the caboclos (Brazilian country people). The invention, however, seems to be of Indian origin.

481 222 [137] The pupunha palm (Guilielma speciosa Mart.), however, which plays such an important role in the economic life of the Surára and Pakidái, cannot be climbed in this fashion, because its trunk, the diameter of which is 60-80 centimeters, is covered with long, pointed thorns. In order to be able to harvest its fruits [184] in spite of this, these Indians use a climbing apparatus -- kanaáke -- which is also familiar to the Waiká (311b).

311b. Barker, 1953, p. 446 and Fig. 1.

/56 cont./

481
222 The apparatus consists of two devices completely alike, which are fastened and used in the following manner: Two sticks, 1.60-1.80 meters long, whose diameter is 12-15 centimeters, are tied to the trunk scissors-like and loosely with lianas. The downward-pointing rear part of these crossed sticks is also wound with lianas. Above this first climbing apparatus a second one is attached in the same manner. The Indian who wishes to climb the pupunha palm now stands on the rear end of the lower "scissors" and pushes the one above it upward a short distance. Then he climbs on the rear end of the upper "scissors" and pulls the lower one after him. Next he shifts back to the lower climbing device and pushes the top one up a bit farther. Thus, by constantly changing his position and pushing one apparatus up and drawing the other one after him, he reaches the crown in 4-5 minutes (Ill. 39). He picks the ripe fruits and lets them down one by one on a liana, where his fellow tribesmen receive them. The descent is the reverse of the ascent.

481
222
174 I venture to doubt that this magnificent technical invention was developed by the Waikâ, Surára, or Pakidái, above all because the rest of their material culture is extraordinarily poor. There is nothing to indicate an import, however. Influences of civilization are likewise out of the question, for the caboclo population (planters, rubber /57/ and palm-fiber gatherers) in the Demini-Aracá area is unfamiliar with the technique described; they knock down the pupunha fruits with long poles.

303

13. Preparation of Urucú

The red coloring urucú -- narâ -- with which the Indians paint their bodies as well as their implements, is made by the women from the red seeds of the Bixa orellana which are found in thorny capsules. The seeds are cooked in a vessel until only a red sediment remains on the bottom, which is shaped into lumps and allowed to dry. With this the Indians are then able to paint themselves at any time; the color must first be moistened, however, with a little water or saliva.

Surára
Pakidai
Waica

/78/

226
184 Among the Waiká, too, fishing ranks last in the acquisition of food and is likewise practiced with bow and arrow there, as well as with the fishhook in more recent times. It is worth noting, however, that in addition they are familiar with a method of fishing by poisoning the water (356a) (356b) 357).

356a. Barker, 1953, pp. 464/65.

356b. Zerries, 1956b, p. 152.

357. Zerries, 1958c, p. 179.

• 222 d) Gathering

[462] Not only women, but also men take part in the gathering activity. The latter have the duty in particular to bring in the fruits of the many palm species (358), of which the following are

358. The general name for palms is -- petabaámo.

the most important: açaí (Euterpe oleracea Mart.) -- uaiíma --, bacaba (Oenocarpus distichus Mart. or Oenocarpus bacaba Mart.) -- hokomaké --, bucu (Manicaria saccifera Gaertn.) -- yauetosík --, buriti (Mauritia vinifera Mart.) -- etewexí --, curua (Attalea spectabilis Mart.) -- yauatoá --, tucuma (Astrocaryum sp.) -- pahá -- (359), and pupunha (Guilielma speciosa Mart.) --

[481]

359. To climb the palms named they used the climbing ring (see pp. 119/120).

komunamá -- (360). The fruits of smaller palms that are easy to

[481]

360. Since the trunk of this palm is covered with sharp thorns -- miímicibá --, it can be climbed only with the help of two specially constructed implements (see pp. 121/122).

/78 cont./

222 climb, such as the piaçaba (Attalea funifera Mart. and Leopoldinia piassaba Wal.) -- tanbarí -- and ubim (Geonoma sp.) -- komixí --, are gathered by men and women in the same manner.

[462] A division of labor between the sexes may be observed in the gathering of the fruits of the inga trees (Inga sp.) -- kepó -- growing on the banks of rivers and brooks. In this case, however, they do not take the trouble to climb the tall, broad-limbed trees. They are felled by the men, and then the women and children strip off the long, dark-green, hard-shelled pods, the beans of which are embedded in a white, spongy pulp as sweet as sugar. This is sucked out and then spat out along with the seed. Men, women, and children relish it even while they are working, but the bulk of the pods are tied together with lianas and carried into the maloka by the women, where the pulp is again sucked out with great satisfaction. -- The fruits of the wild caju tree (Anacardium sp.) -- uitó -- (361) are harvested in the same way, that is, by

361. The corresponding Waikâ name is "widó" (Zerries, 1956b, p. 150).

felling the trees. Of this, however, the Surára and Pakidái eat only the longish, dark-red, shiny receptacle, which is extraordinarily juicy and is especially prized as pleasantly refreshing. The kidney-shaped, greenish-black kernel, on the other hand, is not eaten. -- The fruits of the chestnut, castanha-do-pará (362)

362. We know them as Pará nuts.

(Bertholletia excelsa H.B.K.) -- hokoó --, are very popular. During the rainy season, when the ouriços (ball-shaped husks with a hard shell, which weigh more than one kilogram and contain between 10-30 chestnuts) fall from the tall trees because of gusts of wind, the entire tribe often travels to the chestnut forests on the lower Aracá or the middle Demini, in order to reap a rich harvest here, in which again both sexes take part. The ouriços, wherever they are found, are cut open with a stone or, if available, with a terçado (large bush-knife), and the chestnuts are poured into the

Surára
Pakidái

/78 cont./

●222 carrying baskets. -- Of the fruits of the wild cacao tree (Theobroma sp.) -- boroś --, which has many branches and whose foliage is dense and dark, only the sweet pith of the husks is sucked out, while the beans, which played such an important part among the high-culture peoples of Central America, are carelessly thrown away (363). -- The apple-like fruit of the lucuma tree

[184]
[192]
[114]

363. Zerries reports the same thing of the Waikś, and here the names are "loa" or "boholoa" (Zerries, 1956b, p. 150; Zerries, 1958c, p. 177).

(Lucuma macrocarpa Hub.) -- kumató -- is valued for its sweetish, gelatinous pulp that surrounds the pit; the /79/ outer meat of the fruit and the shell, on the other hand, has a very bitter, unpleasant taste. -- The fruit of the wild pineapple, which only reaches the size of a medium-sized apple, is also eaten with relish.

The pods of the pacova sororoca, a Musaceae species (Ravenala guianensis Benth.) -- mokohé -- (364), gathered espe-

364. The pacova-sororoca is often erroneously called "wild banana" because its large leaves, which resemble those of the banana trees.

cially frequently, contribute more to the everyday food. -- When there is an occasional food shortage during the rainy season, the flat brown fruits of the pot tree (Lecythia longifolia), which are called napú by the Surára and kurupú by the Pakidái, are appreciated to this day (365).

365. The Waikś have the name "wabu" for them (Zerries, 1956b, p. 149; Zerries, 1958c, p. 177); Barker, 1953, p. 443).

Besides these most important vegetable products that are gathered, there are also a great many animal ones. To be named here above all is the honey of several species of small bees (366)

[36]

366. There are said to be more than 20 different varieties of them.

Surára
Pakidái

/79 cont./

222 which can be obtained easily and without danger, for the bees are stingless. Usually they have their nests in hollow trees or in the ground. Occasionally, however, one also sees nests built in tall trees; the latter are then cut down by the men, for the purpose of obtaining the honey. The honey is scooped out of the nest with the hand or with a calabash and put into a folded palm leaf which is then tied together and taken along to the maloka. -- Birds' eggs also constitute a popular addition to the diet, as does the nourishing yolk of the eggs of water turtles; the egg white, on the other hand, is discarded because it has an unpleasant, fish-oil taste. During the dry season, especially during the months December-February, the Surára and Pakidái gather these turtle eggs in great numbers on the sandbanks of the Demini and Aracá. -- [226] Also to be mentioned are crayfish and crabs, which are pulled out of the holes in the mud of the riverbanks. -- I also observed that they eat certain kinds of frogs and spiders, as well as insect larvae, caterpillars, termites, and the hind parts of the leaf-cutter ant (Atta sp.) -- aneanemá.

241 e) Agriculture

Although agriculture among the Surára and Pakidái was introduced only a comparatively short time ago, they have already developed a remarkable system with regard to the laying out of their fields. These are always laid out circularly around the maloka. The procedure is such that, first of all, at the beginning of a dry season, October-November, a rather large piece of forest is cleared, during which it is seen to that the circular shape is [313] produced. To chop down the underbrush and the lianas, the [412] men use the terçados (large bush-knives), and the trees are felled with steel axes (367). After about two months, when the felled

[439]

367. The Surára obtain these articles of civilization from the palm-fiber gatherers by barter, and the Pakidái get them from the Indian protection post Ajuricaba on the middle Demini.

/204 cont./

226 They also fish, but fishing takes second place and is much less important than hunting.

222 241 Other important sources of food are wild fruits and vegetables, which they frequently obtain. Many local groups devote themselves to agriculture, which they carry on in rudimentary fashion and which they adopt from their Caribe neighbors, but for many groups the products of the earth constitute at present a primary food base.

224 The men prefer to go out hunting at dawn or in the afternoon before the sun sets. During the morning they spy on the game as it comes to drink water or to look for food in the places [223] known by the hunter. In the afternoon the Sanemá hunts birds when they return to the trees to spend the night hidden among the leaves.

The men commonly go out alone, sometimes with a com- [789] panion, or in small parties. They walk with great care, without [826] making any noise, and they believe that in a moment of great danger they can develop such power in their necks that it lifts them above the ground and they fly to the height of the trees.

224 /205/ The hunters prepare themselves in various ways for 777 their work. If one of them has had bad luck, he tries to rid 826 himself of the "dark blood," the cause of his poor aim. He [237] achieves this by piercing, by means of a ray-fish sting, the muscles of the arm or by making small incisions on the forearm. [841] "Dark blood" is produced in the body of a man when a woman during menstruation touches the hunter or one of his weapons, or also when a woman in this condition has eaten any of the game hunted by him.

224 A good hunter does not eat any of his own catch in order not 262 to lose good luck or to miss when he shoots. He eats the game [777] of his companion; of the animals caught by him he only asks for the skull and the ribs, which he carefully keeps in certain places near the rancheria or in his house. They are exhibited [554] there in order to augment his prestige as a skillful hunter, on which depend many aspects of his social life, such as, for example, obtaining a second wife.

262 /207 cont./
223 it answers that it is an enemy is he to kill it. In the majority of
825 cases it turns out to be an enemy, and the hunter kills it with a double aim: to have meat and to cause an enemy to disappear. The hunter carries the eagle home, and his wife prepares it for
[514] food. Those who eat the meat must not defecate on the ground,
[785] but only in the water. The hunter himself must not eat any of this meat and fasts for two months. The eagle "weighs heavily" on his chest, and only when it has "gone upwards" does the hunter get better and begin to feel well again. From now on those who have eaten of the meat may live without taking the above-mentioned precautions (22).

22. See the section which deals with "war" /see p. 57 /.

825 It might be said that for every Sanemá rancheria there exists a rancheria of eagles and of hanekasá. This belief has characteristics of the idea of the alter ego, and the Sanemá apply kinship terms to these animals when they speak to them. The same occurs with regard to jaguars and other animals which they mentioned to us vaguely.

226 Fishing plays a very secondary role in the Sanemá economy.
[433] They fish with barbasco, with bow and arrow, but we have not seen special arrows for this purpose. In recent times they have adopted fishhooks, which they now use quite frequently.

● 222 /208/ Of secondary importance, coming after hunting, is the gathering of various kinds of small animals, insects, wild fruit,
[527] and also honey and eggs. The shoots of palms represent an important part of the diet, but above all the fruit of the pijiguao palm (Guilielma sp.), the harvest of which, during the first three months of the year, marks the time of festivities and other social
[114] activities. We were not able to gather much information from the Sanemá regarding this matter, but Barker (1953, pp. 447-48), Zerries (1955b), and Becher (1960) refer to this festive occasion in greater detail, according to their observation of it among the Waica, Pakidai, and Surara (cf. Vinci, 1959, pp. 111-118).

6: Vinci T-5 (1950) 1959 SQ18 Yanoama SQ18
Sanema

him outside the range of the magic influence which had reduced him to such a hideous condition. But evidently they had only escaped the Samatari magic to fall straight into another, which was too much for the sick child. He died, sacrificed in a duel between two magic powers.

VI

The great 'provisioning-march' of the Samatari now began. We went along with them. We were prisoners, we were guests, we were tolerated visitors—a bit of everything. The main body, with the women and children, led the way along a track that was years old and had been opened up again the day before by the younger members of the tribe, who possessed the one metal weapon used by the Samatari: a piece of a knife-blade stuck into a stick and firmly bound with bark soaked in vegetable gum. What story could this scrap of steel have told when it finally reached the headwaters of the Aracosa!

The track was by no means straight, but for all its meanderings led vaguely towards the south-east. It lay for the most part through the dense thickets of fruit-bearing trees, which probably harboured other sorts of foodstuffs of which we knew nothing. The main body arrived to find that the young men had already picked nuts and fruit of all kinds and made piles of them at the foot of the trees. All the women had to do was take them up.

When meat of any sort is found and killed on these occasions, a couple of youngsters stay behind with it. They sling a hammock and light a fire and watch while it is slowly smoking on the spit. When the women come up, they pull off pieces of the flesh, put them into the rough hampers they carry on their shoulders and go on with the march, their babies jogging up and down on their backs, tied there with a strap made of bark. Some, like peripatetic vestal virgins, take fire with them, in the form of glowing brands, blowing on them as they go along lest the embers should grow cold. Thus the march of the Samatari leaves a trail of nutshells, rinds, ash, and little bits of charcoal. It suggests not so much an ordinary nomadic people on the move but rather a very special tribe composed of itinerant cooks.

With evening, or strictly speaking some time before the end of the afternoon, we found ourselves in a vast clearing where all the small plants, shrubs, bushes and grass had been cut away and swept and raked aside. All round this

6: Vinci T-5 (1950) 1959 SQ18 Yanoama SQ18
Sanema

the usefulness of the Corozo palm end here: it furnishes a hard, black wood that gives the Indians their finest bows, real masterpieces treasured with pride by their owners and only bought and sold with a great deal of ceremony.

The *lahsa* represents the Indian food-ideal. It grows in bunches up to eighty pounds or more in weight, each fruit being the size of an egg and in shape and colour not unlike a small, ripe cheese. Cooking it takes a long time. The outside is a thick starchy layer, orange-coloured and rich-tasting without being over-sweet or sickly. It is better than any of our starchy foods such as bread or potatoes or chestnuts or *gnoshi*. The whole of it is edible right down to the little stone itself. This is a kind of delicious almond which crumbles pleasantly under one's teeth and leaves nothing but an insatiable desire for more—hence its name, *lahsa*.

Lahsa can be carried: there are no doubts about this, as in the case of the luamoshi. Its golden bunches are big enough to cover up a man, and the carrier protects himself from the thorns on the branches with a good thick cushion of leaves. In the evening they are cooked, so that the grim-faced women of the tribe are able to produce their milk after all and tirelessly pass it on to the scabby, drooling mouths of their infants, who in their turn convert it into blood and yield it up to the clouds of flies and mosquitoes which wrap them round with a perpetual dark veil like an aura of evil and accursed spirits.

In recompense for its fabulous generosity, the *lahsa* tree has been accorded one great privilege that sets it apart from all the other fruit-bearing trees of the forest: it is never cut down for the easier harvesting of the crop. The fruit is brought down by some clever manipulation of a long pole, for no climber's hands and feet could withstand the thorns. If in very special circumstances the tree has to be cut down, then its upper stem is opened so that its last, secret riches can be cut out—the ten pounds of sweet, crisp, chestnut-flavoured tenderness that is its growing point, the heart. Then the tree will weep out its tears from its torn breast, tears of wine that are lost.

Certainly the tribes living nearest to the forest and the forest's deep anti-human mysteries have chosen the *lahsa* as their god of food: but we, a hybrid mixture of natural fears and supernatural thunderings, chose to set up opposite it our own saint, the yellow and most luscious *sapak*. When the marching horde reached a gnarled tree which evoked the quick cry '*Sapak!*' they flung themselves at it—such is their agility in tree-climbing that they literally seem to fling themselves up—and began a feast that reduced them to silence because

/442 cont./

221 462 When the larger river is low, the men wade into the current and shoot at the fish with their arrows with bone points. Then, since the arrow lacks a string with which one could pull in the fish, they must run after the game in order to finish it off with blows of the machete or club.

226 For fishing they are beginning to use hook and line with increasing skill.

262 Almost all species of fish and aquatic animals are eaten.

222 262 Honey.

To obtain honey, the usual method is to cut down the trunk in which the hive is found, using the ax. Nevertheless, they sometimes manage to climb it and obtain the honey without needing to knock it down. There is also a species of bee which lives in the ground, and its honey must be dug up. They possibly eat the honey of some ten or more varieties of bees.

Eggs.

The eggs of the majority of the wild birds are collected and cooked. They wrap them in leaves and place them on the embers of a wood fire. They are cooked in a short time. Some prefer to eat the eggs when /443/ the chick has begun to form. Turtle eggs are also eaten, but they are scarce, except downriver.

Insects.

Bees are eaten when they are still in the larval form in their nest. Wasps are chased away by means of a torch of dry leaves, which kills or chases away the adult wasps. Then they take down the wasp's nest, which they place for a short time over the hot embers. Roasted wasp larvae are then eaten with pleasure.

Wild fruits and seeds.

It seems that there is not a time without at least a few types of wild fruits and seed in season. Most of these are eaten raw, although a few are cooked. During its harvest, the wabu -- a large seed similar to the frijol -- can be very important, especially when other foods are scarce.

/445 cont./

241 Many of the Guaika /Waica/ are very careful with regard to weeding their plantings, especially when the plants are small. Later, when the plants have reached a good development, they weed the plantings less frequently. Then, perhaps three or more years later, when the land has begun to yield less produce, they cease weeding it altogether and harvest only what has managed to grow by hard efforts.

● 222 Generally, there is found in these "conucos," at least in the abandoned ones, the "pijiguao"palm. This is because the "pijiguao" begins to produce about the time the earth has become too poor for other produce.

222 The fruit of the "pijiguao" palm is harvested by loosening
481 the bunches by means of a long pole with a hook. When the palm has grown too much to perform /446/ this operation from the ground, the Guaika climb it, using two devices, each one made out of a pair of sticks tied together in the form of an X, which, although being adjusted to the thorny trunk of the palm, can be slid up or down while the climber keeps his foot on one of these platforms (see Fig. 1). Once the bunch has been reached and loosened, it is carefully lowered to the ground, tied to a liana to prevent the fruit from being damaged by a fall from such a height. /Fig. 1 appears here./

241 The men are the ones who clear the "conucos." The
[462] women go to the "conucos" more than anything in order to transport the harvests to their homes.

241 Every family has its own "conuco." Frequently the boys
859 begin to prepare their own "conucos" at an early age (at about
[423] 11 years old). Even boys seven years old succeed in having a few of their own plants in the "conuco" of their father or of their older brother. Other boys only help their father in the plantings and have little or nothing until they reach 18 years of age or more.

/446 cont./

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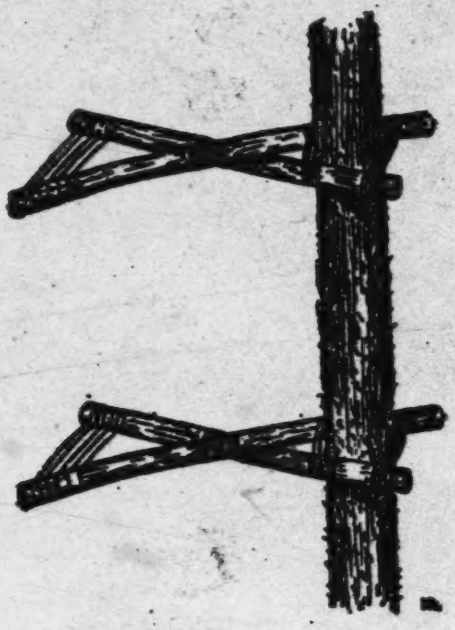

/Fig. 1 ; see p. 16 for explanation./

/450 cont./

252 Ripe platanas are eaten raw or are boiled and mashed in the form of a soup to be drunk. Half-ripe platanos are placed on the fire with their skin.

The fruit of the "pijiguao" is preferred boiled, although it may be cooked directly on the fire when a pot is not available.

"Sweet yuca," the "mapuey," the "ocumo," the sweet potato, and other edible roots are boiled or roasted directly over the fire.

"Bitter yuca" is pounded on a stone. The juice is squeezed out between the hands, and balls are made with the pulp, or dough, and hung in a basket in such a way that the breeze caused by the fire strikes it. The poisonous juice is preserved with strong peppers and ashes to prepare a liquid which they call "yubu," in which certain foods are dipped and eaten. The cooking of the yuca "dough" is done on a piece of broken pottery. First a layer of this yuca is spread out, being left there until it is to be eaten. This cake is not turned, but is taken off altogether in order to put another one in its place. Then the first cake is placed on top of the second one in such a way that its uncooked side is joined to the latter, and they are left to cook until both are stuck together, then being considered ready. Cakes of some 15 to 20 centimeters in diameter and from one-half to one centimeter in thickness are made in this fashion.

Fish and little birds, larvae, and certain insects are wrapped in leaves and cooked over the embers. Small pieces of meat are also frequently cooked in this fashion.

• [222] A large seed in the shape of a frijol, called "wabu," is gathered and eaten. The Indians believe that this seed is poisonous, for which reason they prepare it in the following fashion. It is cooked and thinly sliced. Then it is placed in baskets and put under running water. After remaining for three or /451/ more [262] days under the water, it is considered edible. This seed serves as a reserve in case of a shortage of platanos in the conucos. On such an occasion the whole group moves to live in a place where there is an abundance of "wabu," until the platanos ripen.

/156 cont./

721 In December of 1955 the Shibaatía-tjeti came back to make
123 another raid, accompanied by the Comishibueitjeti. But the Majecototjeti had camped outside, on the other side of the river. Some of the Shibaatía-tjeti approached us carrying an arrow, but leaving their bows in the woods with the other men. They explained that they were friendly visitors and asked where the Majecototjeti were, because they were supposed to visit them. [302] But their black war-paint showed that they had come on a raid. [574] (Visitors are painted with red or mulberry color, but not black.) [822] When they saw that they were not going to get us to tell them where the people were, they asked us to give them matches and [412] fishhooks. They gave us in exchange some knives made of tooth. After this things calmed down, but from this time on the people [361] of Majecototjeti have lived inside their palisades when they were near their main farm.

166 The people of Majecototjeti started a new farm called
361 "Joitja-tjeca" to the south of the Orinoco, where they could
721 live without palisades and feel safe from raids by the Shibaatía-tjeti. The Majecototjeti did not plan any retaliatory raid, because they said, "None of our men have been killed."

727 In September of 1954 I had camped with the Majecototjeti at
361 their new farm to the south of the Orinoco River. Everybody was
[114] calmer there, and they seemed to feel freer than at any time since the first raid by the Shibaatía-tjeti had put them on the alert almost a year before.

● 222 Anyone who wished to do so could go out and gather fruit,
[226] fish, or hunt crabs, even in small groups. The boys were having
[411] fun shooting at the fish in the many streams with their little arrows
[857] of split palm shoots and bows made of a curved stick and a piece of twisted bark. It was the season of the moriche fruit, and the /157/ women went out almost every day and came back carrying
726 baskets full of this fruit. One afternoon about 1:00 P.M. some came to the aldea and said that a great number of tracks had been seen not far from the aldea. A group of men went out to investigate.

241 sweet-potatoes, bitter and sweet yucca (manioc), and two varieties of another root crop known in Venezuela as mapuey. Next in importance is the seasonal crop of peach palm fruits (pijiguao), groves of which are cultivated by the Yąnomamö. [222] Contrary to some accounts, the Yąnomamö never collect this crop from wild trees, although they do return to abandoned gardens to collect the fruit. Other economically significant crops include maize, sugar cane, papaya, pineapples, avocados, peppers and gourds. Also grown are cotton, tobacco, arrow cane, drugs, pigment (bixa), and a large assortment of plants used for magical purposes only. Both their feasting practices [133] [527] and their warfare pattern[1] stimulate the Yąnomamö to grow more [722] than they require for subsistence purposes alone.

241 361 Occasionally the gardens of a particular village may have a preponderance of yucca (manioc) and maize as compared to plantains and bananas. This is usually the result of the distance between the last occupied site and the new one; it is easier to carry seeds and cuttings of maize and yucca than the heavier plantain and banana shoots, and a village that moves any distance usually establishes its new garden largely from cuttings and seeds of these plants taken from the old [262] garden. Eventually, however, the plantains and bananas spread, and a mature garden will always have a preponderance of these crops, the preferred staple of Yąnomamö diet.

222 Wild palm fruits are important additions to the diet

[528] [1]The Yąnomamö are occasionally obliged to take in refugee members of an allied village, and they plan their gardens accordingly.

222 in particular seasons; the most important are manaca, seje, moriche and yagua. The hearts as well as the fruits are eaten, and the Indians usually return to trees they have felled to collect the large, fat, white grubs that mature in the decayed pith. In general, a great deal of energy goes into the collection of these palm fruits in proportion to the caloric return and, even during the peak of the wild fruit harvest, the Yąnomamö still depend heavily on their cultivated foods.

224 Two kinds of hunting techniques provide the Yąnomamö with most of their meat; the occasional kills made by their dogs provide the rest. The first, called rama, is the desultory individual hunting that goes on around the villages. These hunts rarely last more than one day. The second kind of hunting, called heniyomou, involves as many as a dozen hunters who set up a temporary camp a day's walk or more away from the village and use it as the base of operations. This kind of hunting may last five days or more and occurs immediately before a feast, as the etiquette of feasting requires that guests be given fresh meat to eat on their way home after the feast.

Game animals most commonly taken include several species of monkeys, two species of wild pig, tapir, armadillo, agouti, anteaters, wild turkeys, and a small alligator-like reptile (babilla, Spanish). Other game animals taken with less enthusiasm and less frequency include deer, turtles, parrots, snakes, capibara, guinea-hens and a large rodent (lapa, Spanish).

000(lapa, Spanish).

222 The collection of small fruits, spiders, ant grubs, wild honey, crabs, mushrooms and fish also contributes variety to the Yąnomamö diet.

241 Cultivated foods contribute the greater proportion
266 of calories to the Yąnomamö diet, probably upwards of 85%,
[146] although this figure would vary seasonally. Again, those
[177] Yąnomamö villages living close to Makiritare settlements cultivate much more yucca (manioc) than platanos, refining it in some cases to meal as do the Makiritares. Elsewhere
[252] the Yąnomamö eat their yucca roasted or boiled or make cassave bread by a technique quite distinct from that employed by the Makiritare.

722 Yąnomamö material culture is very much attenuated by
[422] comparison with, for example, Makiritare. The Yąnomamö like to limit their possessions to an amount that is readily transported by the women, because the entire village may be obliged at any given moment to abandon its site to avoid raiders, or may be invited to a feast at another village.
[422] They do not like to leave possessions in their village when
[574] they leave it, as visitors from other villages would take them. And, their warfare pattern precludes the possibility of leaving a few people behind to guard the village, as they
[341] would be easily overwhelmed by a raiding party. When just a portion of the village leaves to visit another group, those that stay behind move into the jungle some distance from the village and live in well-concealed huts until their co-

10:Chagnon E-4.5 (1964-1966) 1967 SQ18 Yanoama SQ18

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fishing and collecting forest fruits. (1923: 299-300. My translation. See also 1922:226.)

His assertion that the Yąnomamö lived only on hunting, fishing, and collecting wild forest fruit was unsupported not only by the existing accounts but also by his own observations; and it has never been verified by any field worker who has spent more than a few days with the Yąnomamö.[1] Nor was the conclusion warranted that the Yąnomamö had no fixed habitation sites; Koch-Grünberg was visited by one of the groups and the other had a garden site a short distance from where he met them. Finally, the antiquity of the group as a "population layer" is something that can only be speculated about at best; indeed, the concept 'population layer' is itself an analytic construct presupposing a considerable amount of knowledge concerning tribal distributions over a period of time which, at least for this area, is entirely lacking.

The expedition of the Frobenius Institute in 1954-55 conducted the first anthropological inquiry in this area that concentrated exclusively on the study of the Yąnomamö. The members of the expedition, Otto Zerries and his assistant, Meinhard Schuster, spent 10 months in the village of Mahekodotedi. They selected the Yąnomamö because of their interest in hunters and gatherers; the literature, especially the work of Koch-Grünberg, described the Yąnomamö as such. They

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[1] "It is surprising to notice, that the Waica, formerly reported as a hunting and gathering tribe by visitors who had only superficial contact with them, are actually horticulturists." (Zerries, 1955:78.)

114 initiated their work among this group, in Zerries' words, ". . . to come a step closer to the problem of the world's oldest cultural layer of the hunter and collector."[1] On arriving at Mahekodo-tedi, however, Zerries was surprised to discover that the Yąnomamö were not in fact hunters and gatherers, but horticulturists:

> To our great surprise we were obliged to conclude right from the start of our investigations that the Waika are above all dependent on the cultivation of the plantain (platano) to a considerable degree. (1958:177. My translation.)

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Although Zerries acknowledges the current horticultural status of the Yąnomamö, his work is frequently characterized by attempts to portray the Yąnomamö as hunting and gathering people who have only recently adopted cultivation and are still in transition from a pure hunting and gathering stage to a purely horticultural one. Thus, Zerries argues that the Yąnomamö divide their year into seasons fixed by the ripening of individual species of wild fruits (which I have not been able to verify), implies that peach palm (pijiguao) was recently a collected rather than a cultivated fruit, describes the Yąnomamö settlement pattern and annual cycle as half-nomadic or semi-nomadic, and generally emphasizes the role of hunting and collecting in determining the cultural status of the Yąnomamö in South American culture history, all of which detract, I believe, from an understanding of their culture as it exists at the present time and probably has

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[1] 1964:1. My translation.

existed for the past several hundred years. At many points the data used by Zerries to infer that they were until recently hunters and gatherers lend themselves to other interpretations:

> Finally, the Waika connect the general word for food, "ni," with the word for archery, "niai," out of which results that in their conceptual world, subsistence itself in the last analysis results from hunting--which is symptomatic of the way of life of the hunting and gathering heritage of the Waika. (1958:180. My translation.)

The word nii (not ni) usually refers to vegetable food, most of which is cultivated by the Yąnomamö and generally does not include meat. The word for the latter, yąro, conversely, does not apply to vegetable food. Again, there are two words to describe hunger; ohi refers to that kind of hunger that can be satisfied by eating vegetable food, whereas naiiki is a kind of hunger that can only be satisfied by eating meat or fish. And, it is possible for individuals not to be ohi but be naiiki. One could easily argue that subsistence and cultivation are intimately linked, as their word for one form of hunger (ohi) is similar to their word for taro: ohina. The similarity, then, between the word for archery (niaö) and vegetable food (nii, not ni) tells us nothing about the cultural status of the Yąnomamö either in the past or at the present.

In general, Zerries' data are excellent and his conclusions sound; and his major work (1964) will remain the basic ethnographic source on the Yąnomamö for many years.

The Frobenius Expedition was followed by the work of

11: Chagnon E-5 (1964-1968) 1968 SQ18 Yanoama SQ18

4 feet off the ground at the rear and 6 feet off the ground at the front. Shorter sticks are then laid crossways on the major roof poles and these, in turn, covered with several layers of long, broad, wild "banana" leaves (see Glossary, under "Banana, wild"). It is quite small, but can sleep three individuals. Frequently, the traveler finds the remains of one of these houses and has merely to put a new layer of leaves on the roof to make it waterproof; occasionally, he takes a chance that it won't rain that night and does not improve the hut at all.

When the Yąnomamö settle a new area, they erect temporary villages of these crude huts and live in them until they can build a *shabono*. They also live in huts like these while they are re-roofing the old *shabono*.

The permanent village is complete when the palisade of logs is erected around its circumference. This is placed some 3 or 4 feet behind the roof, allowing space for a path around the village inside the palisade. The palisade itself is about 10 feet high and usually made of a mixture of palm and hardwood logs. It is kept in repair only when there is some reason to suspect raiders. Otherwise, people pilfer logs from it for use as firewood. The entrance to the village, as well as the palisade entrance, is covered with brush and logs at night to keep out intruders. Anyone trying to enter will inevitably make the brush move and alarm the village dogs.

FOOD AND ITS GATHERING The jungle provides numerous varieties of food, both animal and vegetable. The most commonly taken game includes several species of monkeys, two varieties of wild "turkey," two species of wild pig, armadillos, anteaters, tapir, deer, a small alligator, small rodents, and several species of smaller birds. Wild vegetable foods commonly exploited by the Yąnomamö are: palm fruits of several species, hardwood fruits, brazil nuts, tubers, and the seed pods of the feral banana. Of these, the palm fruits are by far the most significant.

These occur seasonally and, for brief periods of time, produce large quantities of fruits. Unfortunately, there is very little edible substance in each fruit, so that in order to get filled, one must eat the edible portion of enormous quantities of fruit. The Yąnomamö extensively exploit two closely related palms, *yei* and *karushi*. The *yei* fruits are about the size of small hen's eggs and occur in large clusters, weighing 80 pounds and more, near the tops of the palm trees. The *karushi* fruits are about half that size. The exterior portion of the fruit is a leathery shell which is peeled with the teeth. Inside there is a thin layer of very bitter, white flesh. This is chewed and sucked off. The taste resembles that of a poor grade of bath soap. Of the two, I found *karushi* the more repugnant. My throat burned when I ate them.

Another commonly exploited palm is the *ediwishi*. It is tangerine red in color and covered with a leather-like skin that consists of hundreds of small scales. They are about the size of large hen's eggs and resemble small hand grenades. When the fruit is dry, as, for example, when it is first cut from the tree, it is almost impossible to get the leathery scales off. The Yąnomamö overcome this difficulty by throwing the fruit bunches into water and letting them soak for several days, after which the scales can be easily scraped off with the fingernails, exposing a thin layer of yellowish, soft flesh that tastes very much like cheese. The fruits begin to ferment after they have soaked, producing a slightly pungent taste. I enjoyed eating *ediwishi* with the Yąnomamö; the fruit was good, and the technique of eating it was very sociable. We would wade into the swamp where the fruit had been submerged and grope around in the murky water to locate it. After

222 262 we had each accumulated a half bushel or so, we would then proceed to eat them. In general, it takes a lot of work to get filled up on palm fruits.

The Yąnomamö also collect wild honey in considerable quantities. Nothing excites them more than locating a dead tree in which a swarm of bees has built a nest. They will halt everything and, if need be, spend the entire day chopping the tree down [123] to get at the honey. When I began my fieldwork I hired about a dozen men to cut trees for me so that I could build a mud hut. They would be gone all day and return with just a few poles, demanding a full day's pay for their efforts. I decided to accompany them one day to see what they were up to. We spent the entire day wandering through the jungle, eyes glued to the tree tops above. Each time I spotted a suitable tree, they talked me out of cutting it down because "it would rot" or "it is too far away from the river." By mid-afternoon we had not cut a single tree, but had walked over a large area of jungle. Finally, one of the men shouted for the rest of us to come. All the men descended on the large, dead tree he had located, and set about chopping it down with the axes I had provided. It took about an hour to get it down. They then spent another hour chopping holes along the length of the tree trunk to get at the honey inside. When it was exposed, they gleefully tore the combs out, dunked them into the amber liquid, and gorged themselves on the larvae-filled combs. After they had eaten their fill of this, they collected a large pile of leaves and made a crude bowl. Then they stuck handfuls of leaves into the honey and squeezed them out into the leaf bowl. When they had gotten all the honey they could reach, they scoured the nest with leaves and licked them off after each plunge [123] of the hand into the bowels of the trunk. They borrowed the aluminum kettle I had brought along and used to cook our lunch in. As we were some distance from the river [272] and they were impatient, one of them filled the kettle with muddy water he found in a swamp a short distance away. Some of the honey from the bowl was poured into the kettle, along with dead adult bees, twigs, leaves, dirt, and several dozen larvae. They passed this around among themselves, each man drinking about a quart or so of the mead after blowing the debris off the surface in order to expose the water. The remainder [251] of the honey was wrapped up in its leaf bowl, tightly bound with vines, and carried back [123] to the village. On the way back to the canoe we cut a few light trees for my mud hut. They had gotten what they were looking for all day, and I managed to get a few logs. They demanded a full day's pay when we reached home. Thereafter, I paid them by the log rather than by the day.

222 231 262 Finally, several varieties of insects are collected. Perhaps the most desirable food in this category is the grub of an insect that lays its eggs in the decaying pith of dead palm trees. The Yąnomamö come very close to practicing "animal domestication" in their techniques of exploiting this food. They deliberately cut the palm tree down in order to provide fodder for the insect. When they cut the tree, they also eat the heart of the palm, a very delicious, crunchy vegetable that slightly resembles the taste of celery hearts. One palm we cut yielded an edible heart of about 50 pounds. After the pith has been allowed to decay for several months, it contains numerous large, fat, white grubs. The pith is dug out of the tree with sticks, broken open by hand, and the grubs extracted. Each grub is bitten behind his squirming head, and the head and intestines removed simply by pulling the body away from the teeth. If a grub gets damaged in the process of extracting it, the parts are eaten raw on the spot. A fair-sized palm tree will yield three or four pounds of grubs, some of them as large as a mouse. The grubs

11: Chagnon E-5 (1964-1968) 1968 SQ18 Yanoama SQ18

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Fig. 2-6. Rerebawä climbing a rasha *tree to collect the palm fruit. The tree has many sharp spines on it, and the Yąnomamö use an ingenious device made of crossed poles to climb the tree. The climber stands on one pair of poles and lifts the other pair up the tree. Then he climbs to the upper pair and lifts the bottom pair up. In this way the tree is slowly ascended, and no thorns get stuck in the body.*

The grubs

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are wrapped in small packages of leaves and placed in the hot coals to roast. They render 231
down in the heat, yielding some liquid fat, which is licked off the leaves, and a soft, 252
white body. I could never bring myself around to eat one, but an experienced missionary 262
told me they tasted very much like bacon. But then I suppose that anything cooked in [251]
a smoky fire tastes like bacon.

The discarded seeds of palm fruits also get infected with much smaller grubs. 222
The Yąnomamö break the hard seeds open with a rock, extract the grub, and prepare 252
it in the above manner. 262

Some species of caterpillar are also eaten. They are not cleaned before cooking; the squirming insects are simply wrapped in leaves and thrown into the coals to roast.

11: Chagnon E-5 (1964-1968) 1968 SQ18 Yanoama SQ18

222 252 262 They have much less fat on them than grubs, and become dry and crunchy during the cooking, having a texture and form like cheese pone when prepared.

Large spiders are also collected; they are simply placed directly on the hot coals and roasted alive. The legs and thorax are eaten.

Another common insect food is the larvae of a species of large ant. Only the head of the squirming larvae is eaten. It is very crunchy and has a nutty taste, but one must exercise caution in eating them since they are equipped with sharp pincers and can inflict a painful wound on the tongue or lip.

224 411 The game animals are all shot with arrows. The curare palm points are usually used for monkey hunting, while the lanceolate bamboo points are used for large game, such as deer, tapir, and wild pigs. A third kind of point is used for birds. It consists of a long, slender stick to the end of which has been bound a splinter of gently curved monkey bone. This serves as the penetrating point and the barb; it is difficult to extract the point once the barb enters the animal.

The Yąnomamö also fashion a fourth kind of arrow point as they need it. It is simply a stick that has numerous twigs branching in a close cluster. The twigs are cut off an inch or so from the main branch, and the stem is inserted into the end of the arrow shaft that usually contains the curare-tipped point. This fourth type of point is used to [237] kill small birds whose feathers are desired for decoration purposes. On one occasion I saw a young man fashion one of these points in a few seconds. He saw a small bird, located a shrub a few feet away, bit off a branch with his teeth, bit the twigs off, and stuck the point into his arrow shaft—without taking his eyes off the small bird for a second. This type of point is discarded after it serves its temporary purpose.

224 The Yąnomamö do not employ traps or compounds when hunting. They frequently use dogs to run tapir, pigs, and deer, but most hunting is merely the individual stalking and shooting whatever game is available. As men always carry their weapons with them when they leave the village, they are, in effect, hunting continuously. A communal type of hunting trip invariably precedes a feast; this is described in Chapter 4.

The technique for capturing armadillos is very interesting. Armadillos live in burrows deep underground, and the Yąnomamö are always investigating the entrances of these burrows to see if any signs of recent occupation can be found. If the burrow is occupied, the hunters quickly cover the entrance with combustible materials and start a fire. After the fire is blazing strongly, they find a dried termite nest, which produces large quantities of smoke, and put it onto the fire. When this is ignited, they fan the smoke into the burrow, cover the fire with sand, and look for other openings to the armadillo den. These are quickly spotted when smoke begins to emerge from them and covered with sand to keep the smoke in. Then the men crawl around with their ears held to the ground. The armadillo will sometimes start burrowing in order to escape the smoke; when he does, he is heard and his location immediately established. A stick is used to dig into the ground and find the animal, usually 2 or 3 feet below the surface. On one occasion the men had difficulty locating the animal and dug several holes without hitting the burrow. One of them then uncovered the entrance, obtained a thick vine from a nearby tree, and tied a knot in the end of it. He then introduced the knot into the burrow by spinning the vine rapidly between his hands, pushing it in gently as it twirled. When he could not get the vine to go any further, the men listened on the ground to locate the spinning knot. When they found it, they marked the spot. The vine was

11: Chagnon E-5 (1964-1968) 1968 SQ18 Yanoama SQ18

removed and laid along the ground in the direction of the burrow to measure the distance from the entrance. The men began digging at the end of the vine and located the asphyxiated armadillo on the first attempt.

The jungle provides many other kinds of foods and products too numerous to mention. Some, like vines and lianas, are very useful and commonly employed in basket-making; others, such as edible mushrooms, crabs, pigments, and decorative plant products, are less significant, and exploited only sporadically. Despite the amazing variety of food products to be found in the jungle, however, the Yąnomamö could not exist for any substantial period of time on collected foods only: they rely heavily on their cultivated crops. The tropical forest is much less productive and reliable than one would imagine. The most abundant foods, palm fruits, are seasonal—a group of people could only rely on them for a few months of the year, during which time some 80 group members would have to forage over a wide area to obtain sufficient palm fruits to keep everybody well fed.

Game animals are not abundant, and an area is rapidly hunted out, so that a group must keep constantly on the move. Furthermore, hunting depends as much on luck as it does on skill and is not a very reliable way to supply nourishment. I have gone on five-day hunting trips with the Yąnomamö in areas that had not been hunted for decades, and had we not brought cultivated foods along, we would have been extremely hungry at the end of this time—we did not collect even enough meat to feed ourselves. On other trips, we often managed to collect enough game in one day to feed the entire village.

GARDENING Although the Yąnomamö spend almost as much time hunting as they do gardening, the bulk of their diet comes from foods that are cultivated. Perhaps 85 percent or more of the diet consists of domesticated rather than wild foods—plantains are by far the most important food in the diet.

The Yąnomamö are constantly looking for potential garden sites. When I hunted with them, the topic of conversation that evening would eventually drift over to the merits of the area as a possible site for a new garden. Most new garden sites are, in fact, discovered by hunters.

The land for a new site should not be heavily covered with brush, which is difficult to remove. The larger trees should not be too numerous either, as it takes a good deal of work to chop them down. Ideally, the new site should have very light jungle cover, should be well drained, near a source of drinking water, and relatively free of thorny underbrush. The Yąnomamö call a garden *hikari täka;* jungle that has the potential of being a good garden is likewise called *hikari täka.*

The first operation in making a new garden is to cut the smaller trees and brush; the bigger trees, *kayaba hi,* are left standing until the underbrush is removed. Then the big trees are felled with axes and left lying on the ground to dry out in the sun.

My older informants claimed that they did not have steel tools when they were younger and had to kill the big trees by cutting a ring of bark off around the base of the stump, using a crude stone axe, piling brush around them, and burning them. The trees rarely fell, but the fire usually killed them, and their leaves dropped off, permitting the sunlight to reach the ground.

They also claimed that making a garden was more arduous in those days because a large area would have to be searched for the necessary quantities of kindling used to kill the big trees. Today, however, steel tools are quite common, being provided by the

11: Chagnon E-5 (1964-1968) 1968 SQ18 Yanoama SQ18

supplies soak the new leaves in water and add ashes from the hearth to the wad. Men, women, and children chew tobacco and all are addicted to it. Once there was a shortage of tobacco in Kaobawä's village and I was plagued for a week by early morning visitors who requested permission to collect my cigarette butts in order to make a wad of chewing tobacco. Normally, if anyone is short of tobacco, he can request a share of someone else's already chewed wad, or simply borrow the entire wad when its owner puts it down somewhere. Tobacco is so important to them that their word for "poverty" translates as "being without tobacco." I frequently justified my reluctance to give away possessions on the basis of my poverty. Many of them responded by spitting their tobacco into their hand and handing it to me.

Work begins as soon as breakfast is completed; the Yanomamö like to take advantage of the morning coolness. Within an hour after it is light the men are in their gardens clearing brush, felling large trees, transplanting plantain cuttings, burning off dead timber, or planting new crops of cotton, maize, sweet potatoes, yuca, taro, or the like, depending on the season. They work until 10:30 A.M., retiring because it is too humid and hot by that time to continue with their strenuous work. Most of them bathe in the stream before returning to their hammocks for a rest and a meal.

The women usually accompany their husbands to the garden and occupy themselves by collecting firewood or helping with planting and weeding. In this way the men are sure that their families are safe and that the women are not having affairs with other men.

The children spend a great deal of time exploring the wonders of the plant and animal life around them and are accomplished biologists at an early age. Most twelve-year-old boys can, for example, name twenty species of bees and give the anatomical or behavioral reasons for their distinctions—and they know which ones produce the best honey. An eight-year-old girl brought me a tiny egg-like structure on one occasion and asked me to watch it with her. Presently it cracked open and numerous baby cockroaches poured out, while she described the intimate details of the reproductive process to me.

The younger children stay close to their mothers, but the older ones have considerable freedom to wander about the garden at play. Young boys hunt for lizards with miniature bows and featherless arrows. If they can capture one alive, they bring it back to the village and tie a string around it. The string is anchored to a stick in the village clearing and the little boys chase it gleefully, shooting scores of tiny arrows at it (see Fig. 3–8). Since lizards are very quick, and little boys are poor shots, the target practice can last for hours. Usually, however, the fun terminates when an older boy decides to make an end to the unhappy lizard and kills it with his adult-size arrows, showing off his archery skills to the disgruntled small fry.

Little girls learn very quickly that it is a man's world, for they soon must assume much of the responsibility for tending their younger siblings, hauling water and firewood, and in general helping their busy mothers.

Most of the people rest in their hammocks during the heat of midday, although they will collect fruits and other wild foods from the surrounding area, if any are in season. They avoid being in the direct rays of the midday sun.

If the men return to their gardening, they do so about 4:00 P.M., working until sundown. Otherwise, they gather in small groups around the village and take hallucinogenic drugs in the late afternoon shadows, chanting to the mountain demons as the